

PORTLAND FIRE WEATHER - 2003 ANNUAL REPORT

2003 FIRE SEASON OVERVIEW

The 2003 fire season started slowly, but was rather active from late July through early September. There were several major fires in the Portland Fire Weather Forecast Area, but not as many as 2002. September started and ended with unseasonably warm and dry conditions. October was rather cool and wet, at least through the 20th. Winter precipitation (November through January) throughout the district was well below normal in November, but above normal in December and January. Snowpack (see Government Camp snowpack figure) took awhile to build. Government Camp had no snow on the ground through early December, then reached 45 inches by the end of December. Although January was quite wet (13.18 inches of precipitation at Government Camp) it was mild as well. The snowpack dwindled to nothing by the end of January. February was somewhat dry. Government Camp recorded 9.67 inches of precipitation, about 70% of normal. The snowpack reached 23 inches by the end of the month, which is about 50% of average. March was quite wet. A good snow pattern set up early in the month. Several cold Pacific storms resulted in significant snowfall for the Cascades. The snowpack increased from 22 inches on March 1 to 77 inches by March 8. In fact, the snowpack increased 43 inches in two days (March 6-8)!!!

March and April precipitation was above normal throughout the district. The exception was on the east side where March precipitation was slightly below normal. However, the east side had a rather wet April. Dufur recorded 2.30 inches in April, which was about 225% of normal (0.96 inches).

The Government Camp snowpack diminished during the latter half of March, but was still at 30 inches by month's end. Another round of cool storms occurred in early April. The snowpack increased to 51 inches on the 6th, but then decreased to a mere 6 inches on the 13th. May was warm and dry. However, Redmond recorded 2.39 inches of precipitation, almost 400% of normal (0.67 inches).

Typically, the Government Camp snowpack usually vanishes by about mid-May. The snow had melted by April 28, but a couple of cool weather systems in May resulted in three inches on the 17th. The snow was gone for good on the 20th, which is normal.

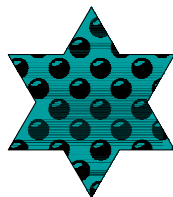
Despite healthy winter and early spring precipitation, early June fuel conditions (ERC and 100-hr) were worse than the previous June. The ERC values were much higher. As an example, zones 606 and 608 had ERC's of 31 by June 20th, compared to just 13 in 2002. In fact, the south coast zones (603 and 612), the Mt. Hood N.F. and the Willamette N.F. experienced critical "dryness levels" as early as June 4th. Overall, fuels remained elevated throughout the fire season. Record or near-record ERC values were achieved throughout the district from late July through August. The most critical period was July 21-31. In zone 609, ERC values reached 85 and 100-hr fuels dropped to 3.1 percent. Fuel conditions abated in mid-September, but showed another spike in late September.

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Fire activity was abundant from July through late August. Although the number of “large” fires in 2003 was less than 2002, the fire behavior was much more extreme. The Davis and B&B fires exhibited some of the most extreme fire behavior ever witnessed. This can likely be attributed to the extreme fuel conditions.

Lightning activity was more frequent in 2003, compared to previous years. The south part of the Willamette and the Deschutes National Forests had above-normal lightning activity in 2003. Historically, the first major lightning episode occurs around the third week of July. This was the case in 2003, as the first major lightning outbreak occurred around the 21st. Another lightning surge took place in early August. Zones 606 and 608 had four consecutive days of lightning (August 3rd through 6th). Normally, lightning probability diminishes during the first week of September. However, this was not the case in 2003. Many areas experienced lightning events during the month. A look at the 2003 lightning distribution (see table 2 on page 9) shows that nearly all areas experienced above-normal lightning activity.

The forecast district experienced six “major” fires during the 2003 season. This was half of last year’s total. A “major” fire is classified as 100 acres in forest fuels or 300 acres in range/grass fuels, or an incident that requires a Type II management team. Most of the major fires occurred in July and August. The first “major” fire occurred in the Willamette National Forest on June 18th. Despite the above-normal lightning frequency, there was a higher incidence of human-caused fires. Five of the six “major” fires had Incident Meteorologists (IMET’s) assigned to them. The Clark and B&B fires had multiple IMETS due to the extended duration of the incidents.



FAST FACTS: The first significant warm spell occurred in late May. Several RAWS sites recorded high temperatures in the mid 80s to mid 90s. Emigrant (zone 608) reached 92 on May 23rd, Wilkinson (zone 603) recorded 92 on May 27th, and Lava Butte (zone 611) got up to 91 on May 29th.

Rockhouse1 RAWS (zone 603) recorded a 10-minute average wind of 21 mph early morning of May 19th. High Point (also zone 603) had a 10-minute average of 15 mph.

There were 32 spot weather forecasts in May. Twelve (12) of those occurred during the last four days. Five spots were issued on the 29th.

The highest 10-minute average wind speed (based on reliable data) in the 2003 season was 33 mph at Rockhouse1 (zone 603) June 29th at 1800 PDT.

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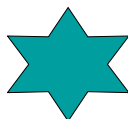
2003 PRE-SEASON: PRECIPITATION AND SNOWPACK

Table One (below) shows the late fall through spring precipitation amounts for selected sites. Nearly all the sites recorded “normal” (100 percent) or slightly above normal precipitation during the pre-season. However, note the monthly distribution. November was rather dry, but conditions improved in December and January. February was another dry month. Early spring (March and April) were wet, but May turned out to be dry. There was quite a disparity on the east side in May. Redmond had 2.39 inches, but Madras had 0.86 inches and Dufur just 0.37 inches.

(TABLE ONE) 2002-2003 WET SEASON PRECIPITATION SUMMARY

	NOV	DEC	JAN	FEB	MAR	APR	MAY	TOT	AVE	PCT AVE
Astoria	5.72	12.77	12.07	4.75	13.45	5.79	2.19	56.73	53.71	105.6%
Newport	4.95	15.04	10.15	5.08	11.95	8.07	1.33	56.57	57.38	98.6%
Laurel Mtn.	14.21	24.13	21.54	8.28	21.97	11.69	3.13	104.95	100.92	104.0%
Portland	1.91	8.00	7.64	2.37	5.75	4.37	1.49	31.53	28.98	108.8%
Eugene	4.72	12.05	6.76	2.79	5.68	5.63	1.07	38.70	42.35	91.4%
G. Camp	5.44	10.18	13.18	9.67	15.87	7.93	4.71	66.98	71.94	93.1%
Oakridge	3.87	9.91	6.52	3.20	6.01	5.73	1.79	37.03	37.19	99.6%
Dufur	0.86	4.07	2.79	1.05	1.46	2.30	0.37	12.90	10.12	127.5%
Madras	0.25	1.91	1.49	0.98	0.57	1.25	0.86	7.31	7.45	98.1%
Redmond	0.05	0.97	1.36	0.42	0.61	0.92	2.39	6.72	5.63	119.4%

The following charts (see graphs on pages 4-8) show the “wet season” precipitation compared to average. Each pre-determined area is represented by two sites (except the Coast Range and East Side North).



The highest temperature during the 2003 fire season (at RAWS sites) was 106 at Emigrant (zone 608), July 29th at 1600 PDT.